



Design Report of Safety Data Sheet

Report No.: DG1720890E
Date: 2017/11/16



Name of the sample	RO scale inhibitor UN-307		
Applicant	Shaanxi Ande Technological Industry Co., Ltd.		
Supplier	Shaanxi Ande Technological Industry Co., Ltd.		
Composition of the sample	Etidronic acid; Water		
Warranty of Design	GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Sixth revised edition		
Design Result of SDS please see next page.			
Designer	华雯	Approver	王红

1. This SDS is valid before the implementation of the seventh revised edition GHS.
2. Information from applicant is key of this SDS, so the center will not respond for the wrong of applicant.

注1：除非特别说明，本报告中数据仅对检测样品负责。

UNLESS OTHERWISE STATED, THE RESULTS SHOWN IN THIS TEST REPORT REFER ONLY TO THE SAMPLE(S) TESTED.

注2：未经本中心许可，本报告不得部分复制。

THIS TEST REPORT CAN NOT BE REPRODUCED, EXCEPT IN FULL, WITHOUT PRIOR WRITEN PERMISSION OF THE CENTER.

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SAFETY DATA SHEET

RO scale inhibitor UN-307

SDS

Shaanxi Ande Technological Industry Co., Ltd.

- According to GHS (Sixth Revised Edition)

Section 1 Product and Company Identification

> Product Identifier

Product Name	RO scale inhibitor UN-307
Synonyms	-
CAS No.	-
EC No.	-
Molecular Formula	-

> Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Relevant Identified Uses	Please consult manufacturer.
Uses Advised Against	Please consult manufacturer.

> Details of the Supplier of the Safety Data Sheet

Applicant Name	Shaanxi Ande Technological Industry Co., Ltd.
Application Address	Flat L, 6F, Western Power International Business Center, 66 Huzhu Road, Xian City, Shaanxi, China
Applicant Post Code	710048
Applicant Telephone	+86-29-82480585
Applicant Fax	+86-29-82486083
Applicant E-mail	huangjin@sxand.com
Supplier Name	Shaanxi Ande Technological Industry Co., Ltd.
Supplier Address	Flat L, 6F, Western Power International Business Center, 66 Huzhu Road, Xian City, Shaanxi, China
Supplier Post Code	710048
Supplier Telephone	+86-29-82480585
Supplier Fax	+86-29-82486083
Supplier E-mail	huangjin@sxand.com

> Emergency Phone Number

Emergency Phone Number	+86-29-82480585
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Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS (the sixth revised edition):

> GHS Hazard Class

Acute Toxicity – Oral Category 5

Skin	
Corrosion/Irritation	Category 1
Eye Damage/Irritation	Category 1

> **GHS Label Elements**

Pictogram



Signal Word

Danger> **Hazard Statements**

H303	May be harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage

> **Precautionary Statements****Prevention**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P312	Call a POISON CENTER/doctor, if you feel unwell.
P363	Wash contaminated clothing before reuse.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

P405	Store locked up.
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Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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Section 3 Composition/Information on Ingredients

Component	Concentration (weight percent, %)	CAS No.	EC No.
Etidronic acid	Commercial secrets	2809-21-4	220-552-8
Water	Commercial secrets	7732-18-5	231-791-2

Section 4 First Aid Measures> **Description of First Aid Measures**

General Advice	Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance.
Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable.

- | | |
|-----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Skin Contact | Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable. |
| Ingestion | Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately. |
| Inhalation | Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately. |
| Protecting of First-aiders | Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination. |
- > **Most Important Symptoms and Effects, both Acute and Delayed**
- 1 Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.
- > **Indication of Any Immediate Medical Attention and Special Treatment Needed**
- 1 Treat symptomatically.
 - 2 Symptoms may be delayed.

Section 5 Fire Fighting Measures

> Extinguishing Media

- | | |
|---------------------------------------|-------------------------------------------------------------------|
| Suitable Extinguishing Media | Dry chemical, carbon dioxide or alcohol-resistant foam. |
| Unsuitable Extinguishing Media | Do not use a solid water stream as it may scatter or spread fire. |

> Specific Hazards Arising from the Substance or Mixture

- 1 Fire may produce irritating, poisonous or corrosive gases.
- 2 Containers may explode when heated.
- 3 Fire exposed containers may vent contents through pressure relief valves.
- 4 May expansion or decompose explosively when heated or involved in fire.

> Advice for Firefighters

- 1 As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
- 2 Fight fire from a safe distance, with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6 Accidental Release Measure

> Personal Precautions, Protective Equipment and Emergency Procedures

- 1 Ensure adequate ventilation. Remove all sources of ignition.
- 2 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- 3 Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

> Environmental Precautions

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.

> Methods and Materials for Containment and Cleaning Up

- 1 Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a

spill by bunding.

- 2 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- 3 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Section 7 Handling and Storage

> Precautions for Handling

- 1 Handling is performed in a well ventilated place.
- 2 Wear suitable protective equipment.
- 3 Avoid contact with skin and eyes.
- 4 Keep away from heat/sparks/open flames/ hot surfaces.
- 5 Take precautionary measures against static discharges.

> Precautions for Storage

- 1 Keep containers tightly closed.
- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/sparks/open flames/ hot surfaces.
- 4 Store away from incompatible materials and foodstuff containers.

Section 8 Exposure Controls/Personal Protection

> Control Parameters

Occupational Exposure Limit Values

No information available

Biological Limit Values

No information available

Monitoring Methods

- 1 EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
- 2 GBZ/T 160.1~GBZ/T 160.81-2004 Determination of toxic substances in workplace air(Series standard).

> Engineering Controls

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ventilating/lighting/equipment.
- 4 Set up emergency exit and necessary risk-elimination area.

> Personal Protection Equipment

Eye Protection

Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US).

Hand Protection

Wear protective gloves (such as butyl rubber) , passing the tests according to EN 374(EU),US F739 or AS/NZS 2161.1 standard.

Respiratory protection

If exposure limits are exceeded or if irritation or other symptoms are experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges.

Skin and Body Protection

Wear fire/flame resistant/retardant clothing and antistatic boots.

Section 9 Physical and Chemical Properties

Appearance: Pale yellow liquid

Odor Threshold: No information available

Melting Point/Freezing Point (°C): No information available

Flash Point (°C)(Closed Cup): No information available

Flammability: Not applicable

Vapor Pressure (MPa): No information available

Relative Density(Water=1): No information available

n-Octanol/Water Partition Coefficient: No information available

Decomposition Temperature (°C): No information available

Particle characteristics: Not applicable

Odor: No information available

pH: 2

Initial Boiling Point and Boiling Range (°C): No information available

Evaporation Rate: No information available

Upper/lower explosive limits[%(v/v)]: Upper limit : No information available ; Lower limit : No information available

Relative Vapour Density(Air = 1): No information available

Solubility: No information available

Auto-Ignition Temperature(°C): No information available

Kinematic Viscosity (mm²/s): No information available

Section 10 Stability and Reactivity

Reactivity

Contact with incompatible substances can cause decomposition or other chemical reactions.

Chemical Stability

Stable under proper operation and storage conditions.

Possibility of

Hazardous Reactions

In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.

Conditions to Avoid

Incompatible materials, heat, flame and spark.

Incompatible Materials

Alkali, sodium, calcium, and other active metal, halogen, metal oxide, nonmetal oxide, acyl halide and metal phosphide.

Hazardous

Decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11 Toxicological Information

> Acute Toxicity

Component	CAS No.	LD ₅₀ (Oral)	LD ₅₀ (Dermal)	LC ₅₀ (Inhalation, 4h)
Etidronic acid	2809-21-4	1800mg/kg(Mouse)	No information available	No information available

> Skin Corrosion/Irritation

Causes severe skin burns and eye damage(Category 1)

> Serious Eye Damage/Irritation

Causes serious eye damage(Category 1)

> **Skin Sensitization**

No information available

> **Respiratory Sensitization**

No information available

> **Germ Cell Mutagenicity**

No information available

> **Carcinogenicity**

ID	CAS No.	Component	IARC	NTP
1	2809-21-4	Etidronic acid	Not Listed	Not Listed
2	7732-18-5	Water	Not Listed	Not Listed

> **Reproductive Toxicity**

No information available

> **Reproductive Toxicity (Additional)**

No information available

> **STOT-Single Exposure**

No information available

> **STOT-Repeated Exposure**

No information available

> **Aspiration Hazard**

No information available

Section 12 Ecological Information

> **Acute Aquatic Toxicity**

No information available

> **Chronic Aquatic Toxicity**

No information available

> **Others**

**Persistence and Degradability
Bioaccumulative Potential**

No information available

No information available

Mobility in Soil

No information available

Results of PBT and vPvB Assessment

Etidronic acid does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

Water does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

Section 13 Disposal Considerations

Waste Chemicals

Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.

Contaminated

Packaging

Disposal

Recommendations

Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible. Refer to section 13.1 and 13.2.

Section 14 Transport Information

Transporting Label



Marine pollutant

None

UN Number

3265

UN Proper Shipping Name

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S.

Transport Hazard Class

8

Transport Subsidiary Hazard Class

None

Packing Group

III

Section 15 Regulatory Information

> International Chemical Inventory

Component	EINECS	TSCA	DSL	IECSC	NZIoC	PICCS	KECI	AICS	ENCS
Etidronic acid	✓	✓	✓	✓	✓	✓	✓	✓	✓
Water	✓	✓	✓	✓	✓	✓	✓	✓	✗

[EINECS] European Inventory of Existing Commercial Chemical Substances.

[TSCA] United States Toxic Substances Control Act Inventory.

[DSL] Canadian Domestic Substances List.

[IECSC] China Inventory of Existing Chemical Substances.

[NZIoC] New Zealand Inventory of Chemicals.

[PICCS] Philippines Inventory of Chemicals and Chemical Substances.

[KECI] Existing and Evaluated Chemical Substances.

[AICS] Australia Inventory of Chemical Substances.

[ENCS] Existing And New Chemical Substances.

Note

"✓" Indicates that the substance included in the regulations

"✗" That no data or included in the regulations

Section 16 Additional Information

Creation Date	2017/11/16
Revision Date	2017/11/16
Reason for Revision	-

> Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 6th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user' s reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

